Form 2995-0127

H-010010

Job# 776526-00
BC# 545214

GENERAL RADIO COMPANY
WEST CONCORD • MASSACHUSETTS, 01781

TEL. 617 369-4400 (Concord)
617 646-7400 (Boston)
TWX 710 347-1051

Supplementary Instructions

2995-0127 Range Control

The 2995-0127 Range Control is an accessory instrument for use with a 1680-A Automatic Capacitance Bridge Assembly (modified for remote range control). The instrument is used to select and hold a desired measurement range.

The Range Control includes a 35-volt power supply and a switch to apply the supply voltage to the range-control lines of the bridge in the proper binary sequence. The BCD logic used is 1-2-4-2 (identical to 1-2-4-8 up to range 7) with:

true = 0 volts

false = +35 volts

A cable is provided to connect to the AUX connector at the rear of the bridge. An EXT connector at the rear of the Range Control provides access to other terminals of the bridge connector.

Operation

Set the BALANCE control of the bridge to HOLD RANGE and set the BRIDGE RANGE control of the Range Control to the desired range. To restore the bridge to normal operation set the BRIDGE RANGE control to INT.

Diagrams

Drawing 2995-9127-2D shows a schematic diagram of the instrument.

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Form 2995-0127

Socket Connections

BRIDGE AUX	EXT	BRIDGE AUX CONNECTION	FUNCTION
1		H3	Range Set 1
2		F3	Range Set 2
3		F1	Range Set 4
4		H1	Range Set 2
5	5	A6	CO
6	6	B3	FR
7	7	B5	FH
8	8	A2	STW
9	9	P13	PRT'
10	10	G4	+12 V
11	11	G6	+6 V
12	12	G8	-9 V
13	13	G10	-15 V
14	14	G2	GND

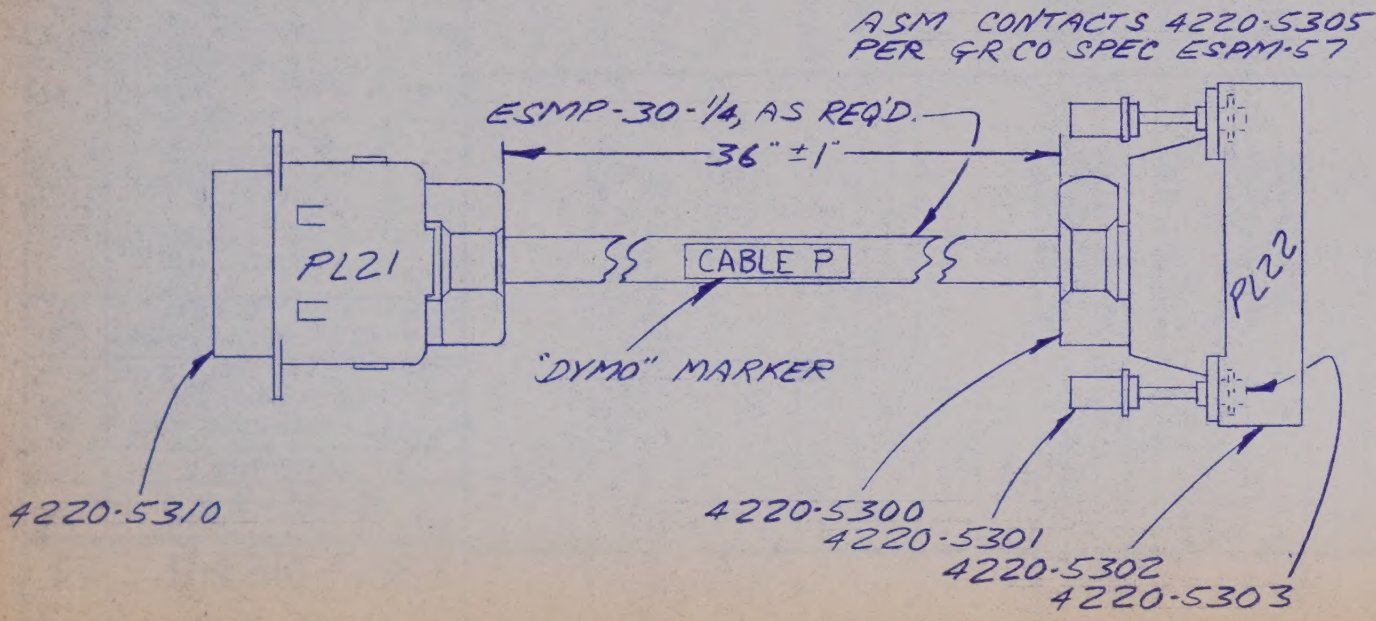
Output Signals

BRIDGE RANGE	BRIDGE AUX 1	2	3	4
INT	OPEN	OPEN	OPEN	OPEN
1	0	+	+	+
2	+	0	+	+
3	0	0	+	+
4	+	+	0	+
5	0	+	0	+
6	+	0	0	+
7	0	0	0	+

USE ESMP-5-2L-24 WIRE
SERVICE WITH ENDS 1/8

PL21	PL22	COLOR
1	H3	BN
2	F3	RD
3	F1	OR
4	H1	YE
5	A6	GN
6	B3	BL
7	B5	VT
8	A2	GY
9	F13	WH
10	G4	WH-BK
11	G6	WH-BN
12	G8	WH-RD
13	G10	WH-OR
14	G2	WH-YE

CABLE ASM "P"
2995-0217



NUMBER	ISSUE
2995-9127-1	1

DATE: 4-17-67	ISSUE 1
REVISIONS	

SCALE Full | FIRST USED ON

DR. ARG | CH. CCH | APP.

GENERAL RADIO COMPANY
W. CONCORD, MASS. U.S.A.

NUMBER	ISSUE
2995-9127-1	1

PARTS LIST

SHEET 1 OF 2

INSTRUMENT 2995-9127 RANGE CONTROL

	NAME OF PART	DWG. NO.	PART NO.	DRAFTING NO.	REQ.
1					
2					
3	RANGE CONTROL	1D	2995 3000		
4	PANEL ASM		2995 3001		1
5	Panel	1D	2995 0841		1
6					
7	Switch S1		7910 1300	SWT-333	1
8	Switch S2		2995 0408		1
9					
10	Transformer T1		0345 9040		1
11					
12	Pilot Lamp P1		5600 1001		1
13					
14	Handle		5360 2007		2
15					
16					
17					
18	Nut		5800 0800	NUD-1444	1
19	Nut		5810 3300	NUH-10-32	4
20	Screw		7090 0800	SCBL-10-32, 1/2	4
21					
22	Stud		7840 0080	STP-10-32, 3/8	4
23					
24	Washer		8040 2400	WALS-10-32	4
25	Washer		8050 0400	WALT-3/8	1
26	Washer		8050 0600	WALT-15/32	1
27					
28					
29					
30					
31					
32	SHELF ASM		2995 3002		1
33					
34	Shelf		2995 0842		1
35					
36	Power Plug PL1		4240 0600	CDPP-10	1
37	Pin		4240 0800	CDPP-10-60	1
38					
39	Fuse F1, F2		5330 0700	FUF-1, 0.25A	2
40					
41	Fuse Mtg Device		5650 0100	MDF-2	2
42					
43	Connector S01, S02		4230 4014		2
44					
45					

NUMBER 2995-9127 ISSUE L/3

GENERAL RADIO COMPANY
W. CONCORD, MASS. U.S.A.

DR. ARG | CH. CCH | APP. | SCALE | FIRST USED ON

REVISIONS

LN 43 PT NO WAS 4230-5004
DFT NO WAS CDMS-44
HTM 1-27-67 EMG 2
LN 10 PT NO WAS 0345-4019
CCH 4-17-67 CCH 3

DATE 12-15-66 ISSUE 1

NUMBER 2995-9127-1L ISSUE 3

PARTS LIST

SHEET 2 OF 2

INSTRUMENT 2995-9127 RANGE CONTROL

	NAME OF PART	DWG. NO.	PART NO.	DRAFTING NO.	REQ.
1	2995-3000, -3002				
2					
3	Capacitor C1		4450 5606	COE-73	1
4	Resistor R1		6100 9755	REC-20BF 7.50 ± 5%	1
5	Rectifier				
6	CR11,CR12,CR13,CR14		6081 1001	2RE-1001	4
7					
8	Clip		5640 1000	MDC-7, 1 3/8	1
9					
10	Nut		5810 0400	NUH-3-48	4
11	Nut		5810 2100	NUH-4-40	2
12	Nut		5810 2400	NUH-6-32	2
13					
14	Screw		7050 0700	SCB-3-48, 3/8	4
15	Screw		7060 1800	SCB-4-40, 1/2	1
16	Screw		7070 0600	SCB-6-32, 1/4	1
17	Screw		7070 1700	SCB-6-32, 3/8	1
18					
19	Screw		7090 4040	SCBL-4-40, 1/4	4
20					
21	Terminal AT10		7930 1300	TELD-6	1
22	Terminal AT11,12,13,14		7970 0600	TEU-10	4
23					
24	Washer		8040 1200	WALS-3	4
25	Washer		8040 1400	WALS-4	2
26	Washer		8040 1800	WALS-6	1
27	Washer		8050 0700	WALT-1/2	2
28					
29	Lead Set		2995 0216		1
30	Screw		7080 1500	SCB-10-32, 1/2	2
31	Screw		7090 0700	SCBL-10-32, 3/8	2
32	Screw		7098 0161	SCBR-10-32, 1/2, NC.	4
33	Spacer		7720 2025	SPFF-10-32, 2 3/16	2
34	Spacer		7777 1032	SPL-10-32	2
35	Knob		5530 1200	ZKNSP-6G	1
36	Bushing		4140 0300	BUMC-13-3	1
37					
38	CABLE ASM "P"		2995 0217		1
39	Connector Plug PL21		4220 5310		1
40	Plug Hood		4220 5300		2
41	Hood Hardware		4220 5301		2
42	Plug PL22		4220 5302		1
43	Plug Hardware		4220 5303		2
44	Contact		4220 5305		14
45					

NUMBER 2995-9127-L/3 ISSUE

GENERAL RADIO COMPANY
W. CONCORD, MASS. U.S.A.

DR. ARC CH. APP. SCALE FIRST USED ON

REVISIONS

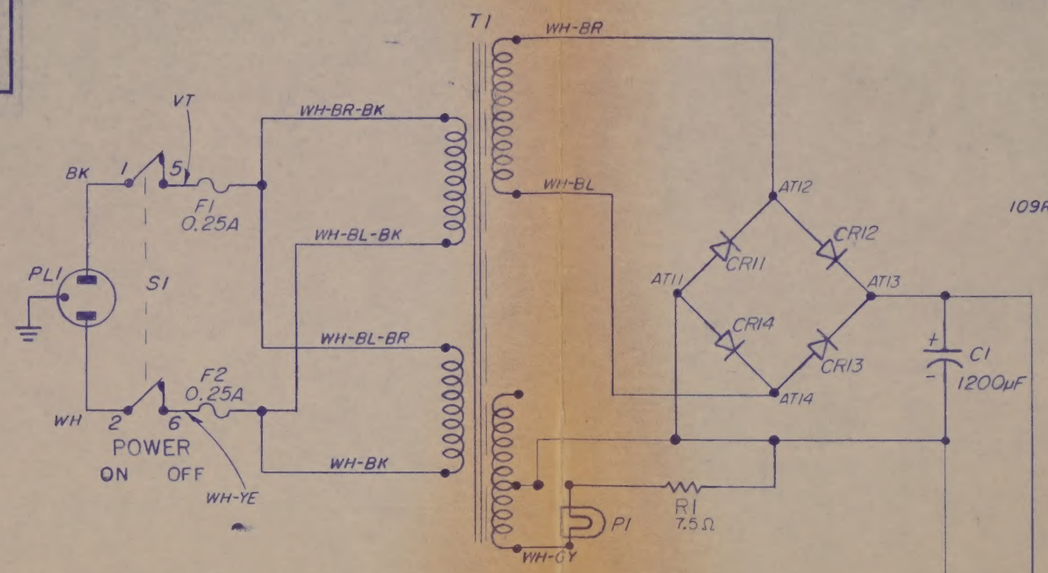
LN 4 ADDED	2
HTM 1-27-67 EMG	
REVISED PER MKD REC. ARG 4-17-67 CCM	3

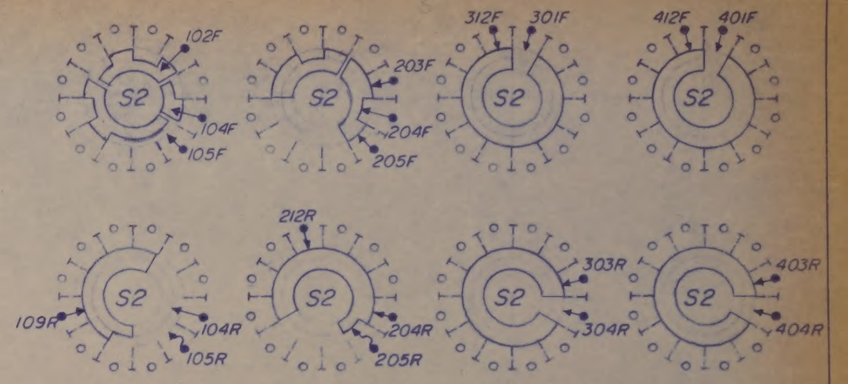
DATE: 12-15-66 ISSUE 1

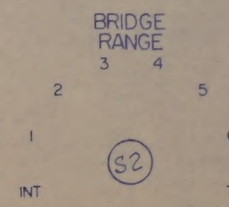
NUMBER 2995-9127-L/3 ISSUE

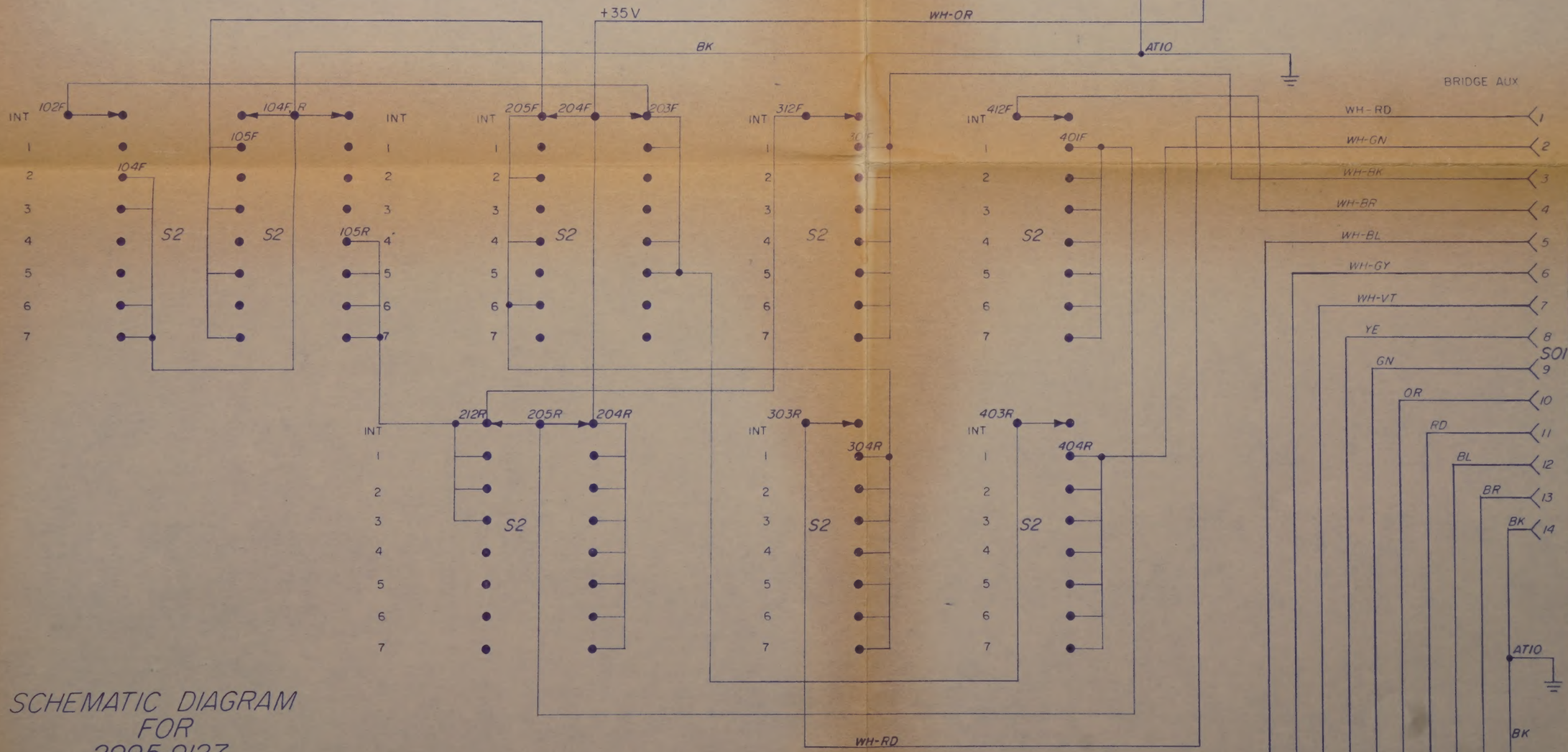
NOTE UNLESS SPECIFIED

1. POSITION OF ROTARY SWITCHES SHOWN COUNTERCLOCKWISE.
2. CONTACT NUMBERING OF SWITCHES EXPLAINED ON SEPARATE SHEET SUPPLIED IN INSTRUCTION BOOK.
3. REFER TO SERVICE NOTES IN INSTRUCTION BOOK FOR VOLTAGES APPEARING ON DIAGRAM.
4. RESISTORS 1/2 WATT.
5. RESISTANCE IN OHMS K - 1000 OHMS M - 1 MEGOHM
6. CAPACITANCE VALUES ONE AND OVER IN PICOFARADS, LESS THAN ONE IN MICROFARADS.
7. ◯ KNOB CONTROL
8. ⊘ SCREWDRIVER CONTROL
9. AT - ANCHOR TERMINAL
10. TP - TEST POINT









SCHEMATIC DIAGRAM FOR 2995-9127 RANGE CONTROL

NUMBER	ISSUE
2995-9127-2D	2
DATE: 12-21-66	ISSUE 1
REVISIONS	
REVISED PER MCO RECORD HTM 1-25-67 EMG	2
SCALE —	FIRST USED ON
DR. ARG CH. CCM APP.	

GENERAL RADIO COMPANY
W. CONCORD, MASS. U.S.A.

NUMBER 2995-9127-2D ISSUE 2